Toya Caldera and Usu Volcano
Global Geopark

Geosite Databook

Toya Caldera and Usu Volcano
Global Geopark Council
A geosite is a point of interest on Earth where you can see, enjoy, learn about, discover, and deepen your knowledge and opinion about the area. The Toya Caldera and Usu Volcano Global Geopark has geosites offering a wealth of information in a great variety of areas including education, tourism, science, nature, history, and culture. In particular, from the point of view of the “Ever-changing Earth,” it contains many valuable points of interest that cannot be found elsewhere, causing it to be recognized as a global geopark.

The Toya Caldera and Usu Volcano Global Geopark, and its “Ever-changing Earth,” is an area containing amazing scenery that has been formed through many years, and which will continue to change for years into the future. Here, geosites are categorized into 9 themes depending on the time scales involved.

A geopoint is a place where you can see and experience a geosite. Each geopoint has an information board that provides detailed information of the geosite that is visible from that point. Quite frequently, local guides also provide talks at these points. Some geopoints also contain monitoring stations that monitor access to the area from an environment conservation and safety point of view. In case of special guided tour planned under the support of the Geopark and the National Park authorities, participants may visit restricted area and feel the importance of earth’s activity displayed there.

There are also a number of trails that connect these geopoints together. Visitors can experience the Toya Caldera and Usu Volcano Global Geopark by traveling through these trails on foot or by bicycle.

The Museum contains an educational exhibition full of information, where visitors can deepen their interest and increase their knowledge. Also, the Information Center provides information on the geopoints and their recommended routes; there you can also book a tourist guide, etc.

This Geosite Databook contains a great wealth of information. We hope that it will increase your expectations and interest in the Toya Caldera and Usu Volcano Global Geopark.
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- **International** Education/Disaster awareness/Tourism/Science
- **Nature** Landscape/Nature/National

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### Notes
- The year 1943-1945 corresponds to the period of volcanic eruption and formation of Showa-Shinzan.
- The year 1977-1982 corresponds to the period of eruptions at the peak and ground deformation
- The year 2000 corresponds to the formation of a new cryptodome.
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Trail Walking path / Footpath
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Museum

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mu02 Date City Fire & Disaster Prevention Center
mu03 Date City Historical Museum
mu04 Usu Zenkoji Treasure Museum
mu05 Sobetsu Information Center “i”
mu06 Sobetsu Local History Museum
mu07 Mimatsu Masao Memorial Museum
mu08 Irie / Takasago Shell Mound Museum
mu09 Toyako Visitor Center / Volcano Science Museum
mu10 Forestry Museum
mu11 Toyaka Takarada Nature Experience House
mu12 Toyako Museum of Art / Toyako Sculpture Park
mu13 Mizuumi Town Library
mu14 Toya Caldera and Usu Volcano Geopark Volcano Village Information Center / Mountaintop Disaster Prevention Theater
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Information center

in01 Road Station “Toyako”
in02 Toy Lake Station
in03 Road Station “Aputa”
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I  Geosite

Theme A  Before the Formation of Toya Caldera

[Miocene - middle Pliocene]

Around the area of the Toya Caldera and Usu Volcano Global Geopark you can observe examples of “Coexistence with the Ever-changing Earth.” There are now only a few places left where one can see the geological features prior to the establishment of the Toya Caldera, however with the magnificent Toya Caldera and Mt. Usu Volcano spread out right in front of you this is a great place to know the underlying geological wonder of the area.

Geosite A01  Pre-Toya Caldera: Igneous Formations

Most of this area was volcanically active during the Mid-Miocene to Pliocene ages. The area consists of pyroclastics and lava flows under sauerial and suaqueous environments. On the other hand, hyaloclastite can be seen around the western coastal areas, which are representative of subaqueous volcanism. Moreover, andesite stratovolcanoes were active in the region from Pliocene to middle Pleistocene. At the southeastern coast of Lake Toya, there are pyroclastic flow deposits such as Takinoue welded tuff and Sobetsu welded tuff, however the origins of these geological formations are unknown.

Keyword: Neogene Tertiary, Welded tuff, Hyaloclastite, Dike

| Geopoint | Sangaitaki Park, Shirakinunotoko, Kita Yuzawa Hot spring, Subaqueous volcanic ejecta at Rebunge Coast, Otaki Niagara Falls, Dike at Rebunge Camping Site, Subaqueous volcanic ejecta around Koboro Cave, Sobetsu Falls, Eboshi Rock |

Geosite A02  Old Horobetsu Sulphur Mine

The biggest sulphur mine in Hokkaido was located at Oukei in Sobetsu Town. Sulphur generated by the volcanic activity of the pre-Toya caldera stage was mined here for a variety of uses. Mining began in the early 1920’s and continued until 1973. Starting in 1939, a tunnel for electric power station utilizing energy created by the water was constructed between Osaru River and Lake Toya. Unfortunately, the water way carried the strong acid outfall (ph1.7) from the sulphur mine into the Osaru river and the lake, causing most of the fish to die out. In 1972, neutralization of the acidic outfall began, and the ecosystem has now recovered.

Keyword: Sulphur Mine, Water pollution, Heritage left by human activities

| Geopoint | Benkei River riverbank, Sluice gate of the water power station, The upper reaches of the Osaru River (above the intersection with Benkei River) |
About 110,000 years ago, the area which is currently Lake Toya experienced an extremely large-scale eruption. The eruption caused a huge pyroclastic flow which burnt out forest land and reached the coast of Japan Sea. The pyroclastic flow was over ten meters thick, covered the region around Lake Toya, and formed a relatively flat hilly area. Moreover, the Toya Caldera, which was formed by this eruption, filled with water and turned into Lake Toya. The scale of this eruption was one of the biggest volcanic activities amongst island arc environment, and similar-scale eruptions have only happened nine times in the past 120,000 years in the Japanese Islands.

Geosite B01 Toya Pyroclastic Flow Deposit

There is a sprawling flat plain (a pyroclastic flow plateau) near the Lake Toya area, as well as existing outcrops of the pyroclastic flow which was formed over 110,000 years ago. Nowadays, the area is used as vast agricultural fields or pastures, and other geological deposits (ash and pumice which were brought by the flow) are used for manufacturing and daily farming, as well as providing good drainage to the soil in the region, thus contributing to the growth of crops in the area.

**Keyword:** Pyroclastic flow, Pyroclastic flow plateau, Outcrop, Pumice, Volcanic ash

**Geopoint:** Bakemonoyama, Sannohara volcanic ash quarry, Kamitateyama volcanic ash quarry, Shin-yamanashi volcanic ash quarry

Geosite B02 Toya Caldera

About 110,000 years ago, the area which is currently Lake Toya experienced an extremely large-scale volcanic eruption. A vast amount of magma was discharged onto land caused by the huge pyroclastic flow eruption, which turned into the collapsed caldera. Through the filling of water inside the caldera over time it eventually came to be Lake Toya as it is today. Lake Toya is the third largest caldera lake in Japan in size, shaped in an almost complete circle, with 11 km in length on the west-east side, and 9 km in width from the north-south side. Nakajima Island is one of the most characteristic sights of the lake, and it was formed by eruptions approx 50,000 years ago.

**Keyword:** Caldera, Huge pyroclastic flow eruption

**Geopoint:** Silo Observatory, Sobetsu Park, Mori to Ki no Sato Center, Lookout at the east of Mt. Kitabyobu, Mt. Orofure hillside Lookout, Caldera wall collapse terrain as seen from Ukimido, Footpath Takarada lakeside course
About 50,000 years ago volcanic activities at the central part of Lake Toya resulted in the formation of a pyroclastic cone and lava domes. This event formed the current shape of Nakajima Island. The series of four islands which are located in the middle of the Lake Toya are generally called “Nakajima Island.”

**Geosite C01  Nakajima Island**

About 50,000 years ago a series of eruptions started, resulting in the formation of a pyroclastic cone and lava domes. The low ridges in an arc around Higashiyama are remnants of half of a volcanic body known as a maar. Just off of Higashiyama there is an underwater lava dome with a height of 84 m which is hidden just under the lake surface. At the Nakajima walking paths you can see the geological terrain and stratum that resulted from the creation of Nakajima, and you can see how many deer have adapted to make Nakajima their home. Also, earthenware and stone tools dating from the Jomon period and estimated to be about 3,000 years old have been discovered on Ooshima island. To find ruins like this on an island in the middle of a lake is a unique find in all of Japan, and gives us a unique look at the culture and lifestyle of the Jomon people.

**Keyword:**  Lava dome, Pyroclastic cone, Deer, Ecology, Ruins

**Geopoint:**  Footpath Nakajima Island course, Naka-Toya Camp site, Tsukiura-dai, The half-formed island, Base surge deposit at the west coast of Nakajima, Cavities at the foot of lava dome, Volcanic landform around Daisogen, Platy joints of lava dome, Nakajima pyroclastic flow deposit
Birth of Usu Stratovolcano
[20,000 - 7,000 years ago]

About 20,000 years ago, a series of eruptions started in the area south of Lake Toya and formed Mt. Usu. At that time, Usu’s magma is thought to have been either basalt or andesite, and the mountain was shaped as a cone-form stratovolcano. This Usu stratovolcano collapsed about 8,000 to 7,000 years ago, and summit part of the volcano slid down from the summit towards the southwest in the form of a debris avalanche and reached Volcano Bay. Nowadays, visitors can see rolling hills at the southwestern foot of the mountain.

Geosite D01  Mt. Usu Stratovolcano

The volcanic activities about 20,000 years ago ejected basaltic or andesitic lava flow and scoria around the southern rim of Lake Toya, which is where Mt. Usu is located today. The eruption continued for 10,000 years, resulting in the formation of the cone-shape stratovolcano.

**Keyword:** Stratovolcano, Lava, Andesite, Basalt  
**Geopoint:** Kita-Byobuyama lava outcrop

Geosite D02  Mt. Donkoro-yama

Mt. Donkoro-yama, located in the Northeastern side of Mt. Usu, is a scoria cone which formed as a result of the strombolian eruption during the formation of Usu Stratovolcano.

**Keyword:** Pyroclastic cone, Strombolian eruption  
**Geopoint:** Mt. Donkoro-yama ejecta outcrop at the Shinzannuma lookout Park, Mt. Donkoro-yama crater, Mt. Donkoro-yama north-western slope

Geosite D03  Debris Avalanche Deposit

At the southwestern foot of Mt. Usu, there are continuous landscapes of scattered small hills. This sight is a result of a sector collapse of the Usu Volcano about 8,000-7,000 years ago, which caused a debris avalanche that formed the deposit at the southwestern foot of the mountain. There are landscapes called “hummocky hill” at the foot of the mountain. In this area visitors can observe the hummocky hills and experience the immense scale of the geological nature and the history of the ever-changing earth. There are very few other places in the world where one can find a preserved lateral cliff made from a debris avalanche deposit.

**Keyword:** Sector collapse, Debris avalanche, Hummocky hill, Outcrop  
**Geopoint:** Cape Arutori, Lateral cliff of debris avalanche deposit at Irie, Usu Zenkoji Nature Park, Usu area hummocky terrain, Near the Usu Junior High School quarry, Western outcrop of Lover's Beach, Cliff at agricultural field in South Usu Town
### Geosite D04  Jomon Era Residents

Mt. Usu was dormant from approximately 7,000 years ago until 1663. During this period, the land was blessed with lush green countryside and seas teeming with aquatic life, and the Jomon people came to live here. From the many items that can be found in the shell mounds and graves here we can see what the lifestyle of the people who lived in harmony with the volcano and sea was like.

**Keyword:** Kaizuka (shell heap), Remains, Jomon  
**Geopoint:** Usu shell mound, Kita Kogane shell mound Waikaoi shell mound, Usu moshiri ruins, Irie-Takasago shell mound, Ukimi-do remains, Rebunge shell mound

### Geosite D05  Lifestyle of the Ainu People

At the Toya Caldera and Usu Volcano Geopark there are various remains from the activities of the Ainu, the indigenous population of Hokkaido. For example, some parts of the hummocky hill of the Zenkoji debris avalanche deposit were used for constructing Chashi, a type of building which is considered to have been a place which the Ainu people used as fort and/or to conduct rituals. Also, in this area today there are movements to pass on the customs of the Ainu lifestyle by building traditional housing, called “Chise.” This is a valuable site that allows you to feel how the indigenous peoples lived in harmony with nature and the Earth.

**Keyword:** Ainu, Chise, Chashi  
**Geopoint:** Kamuichashi Historical Ruins Park, Date City cenotaph for Ainu and Chise, Ponchashi ruins
After approximately 7,000 years of dormancy, Mt. Usu began its volcanic activity again in 1663 starting with the plinian eruption, which released vast amounts of volcanic ash and pumice. The volcanic ash reached the Tokachi region, which is located over 200 km away from the mountain. After the 1663 eruption, at least three plinian eruptions occurred in by the end of 19th century at the summit region dischaging pyroclastic flows and producing Ko-Usu, Ogari and O-Usu lava domes. The pyroclastic surge accompanied by the pyroclastic flow caused the largest number of casualties in the history of disasters caused by the Usu volcano during the 1822 eruption.

**Geosite E01  Summit of the Mt. Usu**

From the Usu Gairinzan trail, visitors can see a series of lava domes and cryptodomes such as Ko-Usu, which rises up in the crater plain, O-Usu, Mt. Ogari, Mt. Usu-shinzan, as well as Gimmuma crater, which appeared during the 1977-78 eruption. The Southern ridge of the crater plain on Usu Gairinzan Trail, called “Minami Gairinzan” was formed by the deposits around the crater formed by the low-temperature pyroclastic surge which occurred immediately after the plinian eruption phase in 1663. On the other hand the parts referred as Gairinzan were made by the collapses of the stratovolcano approximately 7,000 years ago.

**Keyword:** Pumice, Volcanic Ash, Pyroclastic cone, Pyroclastic flow, Plinian Eruption, Lava dome, Cryptodome

**Geopoint:** Usu Gairinzan route footpath, Pyroclastic cone landscape, 1663 tephra outcrop, Ko-Usu lava dome, Mt. Ogari-yama Cryptodome, O-Usu lava dome

**Geosite E02  Iwaya Kannon**

Enku (1632-1695) was a priest of the Tendaishu sect of Buddhism in the earlier period of the Edo Era. He visited many places around Donan (Southern Hokkaido) while carving Buddhist statues, and it is said that he carved a Buddha statue in 1666 at Koboro Cave in Toyoura town in hopes of calming Usu Volcano after the eruption of 1663. This story reflects the strong impact the 1663 eruption of Mt. Usu had towards the people in the surrounding area and the stimulated fear towards volcanoes. The Buddha statue is currently known as “Iwaya Kannon.” There is an interesting anecdote of a priest being chased by a bear was able to save his life by hiding behind the statue while the bear tore off the head of the statue, which is the explanation for the headless statue.

**Keyword:** Enku, Kannon

**Geopoint:** Koboro Cave

**Geosite E03  Cenotaph for Victims of the Bunsei Pyroclastic Flow**

This eruption, which began on the 12th of March, 1822, resulted in the burning of forest land at the foot of the mountain during the first pyroclastic flow, which took place on March 15th. During the 16th to the 18th the volcanic activity eased temporarily and those who evacuated from Abuta Kotan returned to their residences. However on the 19th the volcanic activity intensified again and the second pyroclastic flow occurred on the 23rd at around 7 in the morning. Due to the pyroclastic surge accompanied with the pyroclastic flow the village of Abuta Kotan (Irie District in Toyako Town today) was destroyed and as a result 103 people out of the 380 residents, most of which were Ainu, were killed.

**Keyword:** Pyroclastic flow, Abuta-kotan, Cenotaph

**Geopoint:** Waday Mohei Memorial stele
Usu Zenkoji is a temple of the Jodo sect of Buddhism, which was established in 826 and features a Buddhist statue called Amida Nyorai which was carved by Jikaku Daishi, a priest of Hieizan Temple. The priests of the temple, located at the foot of Mt. Usu, thoroughly documented over the years the active volcanic activities. The 1822 eruption which damaged Abuta-Kotan is particularly well documented and compares accounts to other records, and the description plays a critical role in estimating future disasters as well as the level of awareness of the people at the time regarding mitigation. The temple also played a historical role in the late Edo period and survived the two eruptions of Usu Volcano in the Edo Era. The temple has maintained its historical architecture and was designated a national historical site in May 1974. At the precincts of the temple visitors can use the trail to observe large trees of quercus crispula as well as the magnificent sight of cherry tree growing in the crack of andesite rock (the Ishiwari Sakura) that was brought by the Zenkoji debris avalanche. This is one of the ideal places to see plants thriving in an environment along side an active volcano.

**Keyword:** Debris avalanche, Pyroclastic flow, Documentation recorded by priests, Ishiwariki Sakura (Cherry tree)

**Geopoint:** Usu-Zenkoji Temple, Old trees surviving the influence of 1822 pyroclastic surge

Climax forest in the Mt. Usu area consists of deciduous broad-leaved forests composed mostly of quercus crispula, and at the southern foot of the mountain are young forests of the same species. By observing fauna at the 1910 eruption site as well as the 1944-45, 1977-78 and 2000 eruption sites, visitors can see a series of transitions from young forest to a climax forest.

**Keyword:** Recovery of plants, Trillium amabile

**Geopoint:** Southern foot of Mt. Usu

From the 17th century until the present, through cultural exchanges with the indigenous people, early settlers, missionaries and others, such as the development of the Volcano Bay (Uchiura Bay) for scallop cultivation and agricultural development of the pyroclastic flow plateau, we can see the links between the earth and the people living here.

**Keyword:** Human activities, Agricultural development

**Geopoint:** Batchelor Memorial Church, Indian water wheel park, Isabella Bird trail, Origin of Volcano Bay scallop aquaculture
1910 Eruption and Birth of Mt. Meiji-Shinzan
[The year of 1910]

Precursory earthquakes to this eruption started on the 19th of July, 1910, and increased in frequency and intensity until the 21st. Cracks formed on the ground and mud with water were discharged which were followed by a huge rumbling of the earth and phreatomagmatic explosion at Mt. Konpira-yama. The explosion created at least 45 craters successively towards Mt. Nishimaru-yama at the northern foot of the mountain. In August, the eastern side of Mt. Nishimaru-yama began to lift and by the 10th of November, the height reached 117 m and created the “Mt. Meiji-Shinzan(Mt. Yosomi-yama)” cryptodome. After the series of volcanic activities, hot springs were discovered at the northern foot of Mt.Usu, which were developed into the Lake Toya hot springs.

Geosite F01 Mt. Yosomi-yama Route Footpath

The Mt. Yosomi-yama Route, which starts from Lake Toya and runs to the Mt.Usu footpath, is a trail that loops around the landscape that was formed during the 1910 eruption and through a peaceful forest. The volcanic activities in 1910 triggered movements of the earth due to rising of magma, which lifted the ground and formed the cryptodome known as Mt. Yosomi-yama. The source of the thermal energy of the current Toyako hot springs originates from the magma of this time. Nowadays, even 100 years after the eruption, visitors walking on the trail can observe the fumaroles discharging vapour.

Keyword: 1910 crater, cryptodome, Recovery of plant life
Geopoint: No. 29-31 craters, No. 20 crater, Fumaroles, Yosomi-yama Fault, Crater at the tuff cone of Mt. Nishimaru-yama

Geosite F02 Genta Ana Crater

Genta Ana Crater is the biggest amongst the 45 craters created by the 1910 eruption of Mt.Usu. Genta Ana Crater is one of the precious sites where one can see firsthand the process of recovering flora from the repeated destruction caused by the eruptions in the past 100 years. Recently the area near Mt. Yosomi-yama has developed forests which contain some deciduous trees.

Keyword: 1910 crater, Recovery of plant life
Geopoint: Genta Ana Crater

Geosite F03 Mt. Konpira-yama 1910 Craters

Mt. Konpira-yama is a cryptodome which is located at the foot of Mt.Usu. The exact age of this cryptodome is unknown. The 1910 eruption created a pair of normal faults, which tore the mountain in the north to south direction. The western edge of the series of craters, which formed during the 1910 eruption, are located at the peak of Mt. Konpira-yama. The distribution of the series of Mt. Konpira-yama craters overlap the distribution which appeared craters during the 2000 eruption.

Keyword: 1910 Crater, Faults
The hot springs at Lake Toya and Sobetsu were formed from a volcanic eruption in 1910 that caused hot spring water to gush up from the ground. The Lake Toya hot springs, which lie at the northwest base of Mt. Usu on the southern shore of Lake Toya, were seen by all of Japan through media coverage after an eruption in 2000 formed craters there. Sobetsu hot springs is the birthplace of the monitoring of volcanic eruption using seismometer. The hot springs are referred to as the “volcano’s blessing” of the Toya Caldera and Usu Volcano Geopark. They are a symbolic theme of the park, and are critically important in the history of the formation of the region.

**Keyword** : Geothermal activity, Hot springs, Human activities

**Geopoint** : Lake Toya hot springs, Sobetsu hot springs
On December 28, 1943, the signs of earthquakes began to appear around Mt. Usu. In January of the next year, the epicenters of the earthquakes gradually concentrated around the base of the eastern peak of Mt. Usu, and places that were once wheat fields, villages, roads, and railroads began to rise up. On June 23, a hydrovolcanic explosion occurred in a field on the western edge of the village of Fukaba. Until October, dozens of large explosions occurred and formed seven craters and a cryptodome about 250m above sea level. After that, in early December, triangular lava domes emerged from the cryptodome until September 1945, and Mt. Showa-Shinzan was formed at 407m above sea level. This volcanic activity and chain of tectonic changes was recorded in sketches by the local postmaster, Masao Mimatsu. Mt. Showa-Shinzan is protected by the Japanese government as a Special National Treasure. It attracts many local visitors as a tourist resource, but is also used internationally as an effective educational resources as well as valuable geologic formation.

### Geosite G01  Mt. Showa-Shinzan

The eruptions in 1943 through 1945 caused the birth of Mt. Showa-shinzan which burnt its underground clay in the midst of its growth, turning it into a natural red-brown brick. There are also traces of the original wheat field, including soil with river gravel left as natural brick in the middle of the lava dome. Even now some surfaces of Mt. Showa-Shinzan reach more than 300 degree celsius, thus there is not much flora at this site. However the summit area displays a unique geological scenery. On the other hand, visitors can observe forests of Populus maximowiczii at the mountain base, 60 years after the eruption.

**Keyword:** Upheaval of the ground, Cryptodome, Lava dome, Recovery of plants

**Geopoint:** Prefectural Route, Tatsuka-Sekinai, Observatory of Sancho (summit) Station of Usu Ropeway, Parking lot at the foot of Mt. Showa-Shinzan, Mt. Usu Parking area

### Geosite G02  Shinzan Numa

Around Mt. Showa-Shinzan, the ground shifted enough to turn a wheat field into a mountain over 400m in altitude as well as to destroy a railway. A part of Sobetsu River, which was a branch of Osaru River, was dammed due to this upheaval. Nowadays it is a small swamp called Shinzan Numa and there is a Shinzan Swamp Lookout Park nearby where visitors can enjoy a panoramic view of the swamp.

**Keyword:** Ground deformation, Dammed Lake

**Geopoint:** Shinzan Numa Lookout Park

### Geosite G03  Remains of Former Iburi Line Railway Bridge

The volcanic activities in 1945-1945 and the significant upheaval of the ground resulted in the retrofitting of parts of the Iburi Line railway (currently discontinued) as well as the prefectural road (currently known as National Highway 453). There are two concrete abutments that supported the railway bridge which are preserved and located 30 m from a small parking lot off one of the tour routes. The bridge passed over Sobetsu River, a branch of Osaru River. Currently the abutments lean to the opposite side of Mt. Showa-shinzan, which confirms that the ground was not only lifted, but also leaned over. At the site there is a signboard to explain the details of the remains.

**Keyword:** Upheaval of the ground, Railway, Remains

**Geopoint:** Remains of the former Iburi line railway bridge
There were precursory earthquakes from the early morning of the 6th of August, 1977, which were felt by many people, and lead to the big plinian eruption at the summit on the 7th at 9:12am. The plume reached the stratosphere (over 10,000m in height) and emplaced vast amounts of volcanic ash as well as pumice into the area. Phreatomagmatic explosion repeated frequently during July to October 1978, and low-temperature pyroclastic surge has discharged. Rainfall on the 24th of October, 1978, pushed the accumulated volcanic ash and pumice downwards, and lahar flows damaged wide areas of the foot of Mt. Usu. This event damaged many houses and resulted in the death of 3 people. The crustal movement continued by 1982, which resulted in damages at the northern base of the mountain.

**Geosite H01 The 1977 Summit Crater**

The biggest crater in the summit area is the Ginnuma Crater, which is a collection of smaller craters that formed as a result of the 1977-78 eruption. Originally there was a swamp called “Ginnuma” at the crater plain, and it was a pasture for cows until 1977. Now at the Ginnuma crater site we can see a young forest which has begun to grow back since the time of the eruption. At the No.4 crater, which was the biggest crater at the time of the 1977 eruption, the ecosystem has already begun to recover, and we can see signs of this including great salamanders and frogs. Visitors can visually experience the rapid recovery of fauna and flora in the area for themselves.

**Keyword:** Series of 1977-1978 craters, Pyroclastic surge, Recovery of plants

**Geopoint:** Ginnuma Crater, No. 4 crater

**Geosite H02 Mt. Usu-Shinzan**

The 1977-78 eruption formed a cryptodome at the summit of the Mt. Usu-Shinzan, as magma intruded into the ground. On the other hand, at the same time as the formation of Mt. Usu-Shinzan, the Ko-Usu Lava dome sunk down. From the Usu Somma Trail visitors can see different lava domes, i.e. O-Usu as well as Ko-usu. Because Mt. Usu-Shinzan is a cryptodome, the underground profile of the crater plain, which divides Mt. Ogari cryptodome can be observed.

**Keyword:** Cryptodome

**Geopoint:** Mt. Usu Shinzan, Divided Mt. Ogari cryptodome, Divided Ko-Usu lava dome

**Geosite H03 Northern Somma**

On the north side of the summit known as Northern Somma, sector collapse occurred at the summit part of Mt.Usu about 7-8,000 years ago which resulted in a horseshoe shaped crater which still remains. On the other side is the Southern Somma, which is a tuff cone that formed during the 1663 eruption. Northern somma was pushed and deformed towards Lake Toya side during 1977-82 volcanic activity.

**Keyword:** Fault, Natural dike

**Geopoint:** North Somma, which was deformed during the 1977-82 volcanic activity
**Geosite H04  Fault Mutations Associated with Crustal Movement**

The ground deformation along with the eruption formed the cryptodome, deformed and slanted normal faults at the cryptodome and craters, as well as a compressive deformed lateral fault outside of the cryptodome. The upheaval of the ground can be found in a wider area, and is easily accessible to visitors to visibly experience the repeated eruption at the foot of the mountain.

**Keyword:**  Fault, Ground deformation  
**Geopoint:**  Mt. Showa-Shinzan Road fault, Mt. Higashi Maruyama fault, Fault displacement of Yamatebashi Bridge, 1977 Eruption Memorial Park, Fault just in front of Fountain Plaza

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**Geosite H05  Former Usu Volcano Observatory of Hokkaido University**

The Hokkaido University Faculty of Science established the Usu Volcano Observatory (UVO) on the hillside of Mt. Usu immediately before the start of the 1977-78 eruptions. During the 2000 eruption the UVO detected precursory movements, which lead to the successful evacuation of the residents before the eruption. Nowadays, the UVO has been moved to a different location, and with new high-tech facilities it continues to observe Mt. Usu.

**Keyword:**  Volcanic Observation  
**Geopoint:**  Former Usu Volcano Observatory of Hokkaido University

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**Geosite H06  Lahar and Countermeasures**

In the eruptions of 1977-78, a plinian eruption caused a large amount of falling ash to cover the entire base of the volcano. In 1978, three lives were lost to lahar that formed by this volcanic ash mixing with rain. After the eruptions ended, various measures were put in place to minimize the effect of disasters caused by lahar. These measures were successful in reducing the number of disasters caused by hot lahar from the eruption in 2000.

**Keyword:**  Lahar, Disaster prevention construction  
**Geopoint:**  Nishi-yama River, Memorial for victims of the 1977-78 eruption
2000 Eruption and Formation of New Cryptodome
[The year of 2000]

From the afternoon of the 27th of March 2000, many volcanic earthquakes were observed. On the 28th, the numbers of earthquakes increased to a point where they could be felt by local residents. Cracks on the ground near the summit of the mountain were found on the 30th, which triggered an evacuation of local residents from the foot of the mountain. At 1:07 pm on the 31st of March, a phreatomagmatic explosion began at the western foot of Mt. Nishi-yama. Fierce tectonic activity continued at the western base of Nishi-yama until August, when it reached a maximum height of 70 m. Although a hot lahar spilled over Konpira crater and threatened the village below, there were no victims due to prior lahar countermeasures and the evacuation of residents. However, long-term evacuation, lahar, and volcanic ash have vastly affected the lives of residents and caused widespread damage. In order to remember the disaster and maintain consciousness of natural dangers as well as revitalize the local community, the community has decided to preserve the ruins from the 2000 eruption, and is leading efforts into studies that can help in understanding how to reduce the effects of disasters as well as lifestyle changes for the region.

Geosite I01 Series of Craters at Foot of Mt. Nishi-yama

At 1:07 pm on March 31st, 2000 Mt. Usu erupted on the west foot into a phreatomagmatic eruption. Afterwards a series of over 65 craters opened up from west foot of Nishi-yama to Konpira-yama. Today these are connected by a series of walking paths. You can observe ruins and remains that have been preserved from the time of the eruption.

Keyword: Series of craters, Ground deformation, Recovery of plants

Geopoint: Trail at the Foot of Mt. Nishi-yama, The first lookout (N-B crater), Fault (N-C crater), The second lookout,
Remains of a sweets factory, Ex-Toyako Kindergarten, N-A crater,
Parking lot with lookout at the Izumi Park Township Route

Geosite I02 Ex-National Route 230

The 2000 eruption completely destroyed Route 230 through the formulation of craters, faults, and cryptodomes at the foot of Mt. Nishi-yama. Because this road has rerouted and preserved just as it was after the eruption it is a good chance to study the effects of volcanic eruption.

Keyword: Ground deformation

Geopoint: Nishi Shinzan Numa, Compressive deformation of roads, Inclined homes, Rifts in old highway,
Sediment of hot lahar
Geosite I03  Ground Deformation at Rim of Lake Toya

Large amounts of pumice and volcanic ash covered the lakeshore of Lake Toya during 1977-78 eruption, and this area has been preserved as the Eruption Memorial Park. The 2000 eruption caused a fault in the park as a result of ground deformation and you can observe the discrepancy in height.

**Keyword:** Fault, Upheaval  
**Geopoint:** Faults at the Usu Volcano Eruptin Memorial Park, Upheaval of the lake shore, Chinkojima area, Ground deformation at the Usu Volcano Eruptin Memorial Park

Geosite I04  Mt. Konpira-yama Route Footpath

At the Usu Footpath Mt. Konpira-yama route, visitors can observe from a close distance the craters, which were formed by the 2000 eruption. The trail also leads to remains of public facilities, which became dysfunctional due to disasters, such as hot lahar. In addition, the area around the craters is ideal to observe the changes in ecology after the eruption. Near a series of craters at the foot of Mt. Konpira-yama, there are sightings of Linaria Japonica, which is interestingly a type of coastal plant.

**Keyword:** Craters, Lahar, Recovery of plants  
**Geopoint:** The 2000 eruption remnant park, K-B (Tama-chan) crater, K-A (Yu-kun) crater, Lookout of Konpira crater, Remains of garbage incinerator, Fault which split the road, Remains of sanatorium for teachers, Remains of Toyako Electronic Railway Bridge, Remains of Konomi-no-sawa apartments, Embankment for lahar prevention

Geosite I05  Precursory Faults at Northwest Side of Summit

Volcanic activities at Mt. Usu are characterized by the repeated precursory tremors as well as appearances of faults, which are signs of the ground deformation. At the 2000 eruption, there were faults on the asphalt of roads at the foot of the mountain as well as at the northwest side of the summit. Because of restricted entry to this area, remains of the fault can still be seen today.

**Keyword:** Faults, Eruption  
**Geopoint:** Faults as a precursory of eruption

Geosite I06  Coastal Vegetation at Mouth of Osaru River

Most of the coastal ecology in Japan disappeared because of embankment protection construction and many coastal plants have become extinct. However, at the mouth of Osaru River visitors can still observe many coastal plants such as Rosa rugosa, Calystegia soldanella, Elymus mollis trin., Ixeris repens, Carex kobomugi, Dianthus var longicalycinus, and Galium verum L. var. asiaticum Nakai. At this location visitors can enjoy the coastal geological landscape as well as sea birds, coastal flora and fauna.

**Keyword:** Rosa rugosa, Calystegia soldanella, Elymus mollis trin., Ixeris repens, Carex kobomugi, Dianthus var longicalycinus, Galium verum L. var. asiaticum Nakai, Sea birds, Coastal vegetation  
**Geopoint:** Coastal vegetation at the mouth of the Osaru River
### Trail tr01  Mt. Yosomi-yama Route Footpath

An eruption in 1910 created a group of craters and faults, which have since turned into forests. This is a hiking route where you can try to imagine what this area, with its craters and faults which were created by the eruption in the year 2000, could look like after 100 years. In the summer, you can also enjoy taking a forest bath. There is also a point where weak fumarolic activity can be observed.

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### Trail tr02  Mt. Konpira-yama Route Footpath

Following the 2000 eruption a large number of craters were created on the western slope of Mt. Konpira-yama, and Konomi-no-sawa, piling up volcanic ejecta and creating lahars. Also, the faults caused the displacement of topography. After the eruption of 1977-1978, the residential area of Konomi-no-sawa was evacuated, and sand-trap dams and artificial rivers were created to reduce the damage caused by lahar. Thanks to these measures, the effect of the disaster was successfully reduced in the eruption of 2000. As well as craters and faults, this route also preserves some remains of the disaster including some municipal housing, public baths, and national highway bridges that were damaged by lahar and cinders.

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### Trail tr03  Western Foot of Mt. Nishi-yama Route

The eruption observed at the foot of the Nishi-yama in the year 2000 took place along the national highway, from the coastal area towards Lake Toya Onsen, and along the town roads parallel to it. Multiple craters and faults were created by this eruption, causing the ground to lift and tilted. Some of these features have been preserved as remains of the eruption disaster.

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**Trail tr04  Mt. Showa-Shinzan to Summit of Mt. Usu Route Footpath**

This route starts at Lake Toya. The 1977 Eruption Remains Park preserves the remains of a damaged hospital that was affected by fault movements caused by the creation of the Usu-Shinzan Lava Dome at the summit. Even though approximately 70 years have passed since the eruption in 1944-45, the ground temperature of the Showa-Shinzan lava dome is still high, and the vegetation is recovering very slowly. The Showa-Shinzan lava dome can be observed from the foot of the mountain. You can take the ropeway to go to the station at the summit. At the top, there is an observation platform from where you can look down to Lake Toya and Mt. Showa-Shinzan, and another observation platform from where you can see the crater floor at the summit, and the groups of lava domes from a distance. If you go down a long set of stairs, you will find a walkway on the outer rim of the crater that goes round the south side of the summit.

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**Trail tr05  Sobetsu Park and Orchard Route**

Sobetsu Park locates on top of the hill on the southeastern side of the Toya Caldera. From there you can see Mt. Usu and Lake Toya, as well as Nakajima. Also you can see the flat lines of the pyroclastic flow plateaus at the edges of the caldera, as well as Mt. Yotei in the distance. Plum blossoms can be observed around the beginning to the middle of May. If you go down the other way from Sobetsu Park to the lake, there is an area full of volcanic ash soil that is unsuitable for paddy fields. In this place there are orchards growing strawberries, cherries, plums, grapes, and apples. Visitors can enjoy fruit picking from early June to early November.

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**Trail tr06  Nakajima Circular Route Footpath**

Nakajima and its surrounding little islands have a group of lava domes and maar volcanoes which were created by repeated eruptions at the center of the Toya Caldera, approximately 50,000 years ago. With this circular route that goes round the eastern half of Nakajima, you can observe the volcanic terrain, and cliffs of volcanic ejecta. The number of wild Deer (Cervus nippon yesoensis) has increased in the forest, so here you are able to learn how they have managed to coexist with the forest.

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**Trail tr07  TakaraDa Countryside and Lakeshore Route Footpath**

A course where you can walk and view Toya Caldera and Nakajima, as well as the nature surrounding the area of Lake Toya. Compared to the south bank of Lake Toya, which has been greatly affected by Mt. Usu's eruptions, the north bank is full of green natural colors, offering calm countryside scenery. Toya TakaraDa Nature Experience House contains exhibitions of the natural surroundings of Lake Toya, and it also offers a range of interesting activities.

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**Trail tr08  Zenkoji Nature Park Hiking Route**

A walking route that goes round the Usu Zenkoji Nature Park. In this route you can walk among scenery dotted with complex undulating terrain, and the gigantic volcanic rock with cracks caused by the sector collapse of Mt. Usu approximately 7,000 to 8,000 years ago. Also, this is a route of great importance as it explains the effects of the Bunsei pyroclastic flow of 1822. Although the vegetation on the slope facing Mt. Usu was completely burnt by the pyroclastic flow, the other side is dotted with old trees with newly grown branches near the roots, which are somehow managing to survive. The famous “ishiwari-zakura,” designated as Hokkaido’s commemorative protected tree, is a famous place for watching cherry blossoms and for enjoying nature.

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**Trail tr09  Poronotto Forest Park Route**

Cape Poronotto is sticking out into Usu Bay; it is similar to the Zenkoji Nature Park in that its hummocky topography being buried at the time of Mt. Usu's sector collapse, has been left almost intact. Debris avalanches are characterized by complex undulating terrains and gigantic volcanic rocks with cracks. As well as offering a circular walking route, it also offers an observation platform at the top from where you can see Komagatake, and the geographical features of the surrounding areas.

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### Trail tr10  Otaki Athletic Park (Nordic Walking) Route

A walking route, approximately 6km long, that goes from the car park at Otaki Athletic Park, and through the forests along the Osaru River. From this route you can enjoy the view of Mt. Tokushunbetsu, and the falls commonly known as the “Otaki Niagara Falls,” measuring 30m in width and featuring a 3m drop.

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### Trail tr11  Rebunge Mountain Trail Route

A mountain trail that was considered as one of the 3 roughest spots in Ezochi (present day Hokkaido), with Rebunge-toge at its center, on the border between Robunge in Toyoura Town and Shizukari in Oshamanbe Town. Excavations took place from 1799 onwards; however, the work was interrupted repeatedly, and proper maintenance was only carried out from 1894 onwards. Famous explorers have passed through here in the past: Takeshiro Matsuura in 1845, and Isabella Bird in 1878.

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Trail tr12  Eboshi-iwa Route

A route that leaves the lake shore and goes to Eboshi-iwa (volcanic neck) and back. On this route you can enjoy walking through nature, and you can also have a clear view of the Toya Caldera.

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Trail tr13  Mt. Usu Mountain Trail

A mountain trail that connects the Usu district with the walkway on the south rim of the summit crater. This is a unique route that can be climbed up on foot, and it can also be used as a downwards path from the ropeway.

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Trail tr14  Mt. Monbetsudake Mountain Trail

A mountain trail that is popular among the people in Date City. From the summit, Mareppudake can be seen over the mountain ridges. You can also see across from the Pacific Ocean to Mt. Usu, Lake Toya, and Mt. Yotei.

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</table>
### Mt. Tokushunbetsu Mountain Trail

A favorite trail among hikers, with plenty of beautiful scenery across all seasons. Alpine plants bloom from the middle of July till the maple season, along the mountain trail that goes from the former Nittetsu Mining site. From the summit you may have a 360-degree view across to Lake Toya, Mt. Usu, the Niseko mountain range, Mt. Yotei, Mt. Eniwa, and Mt. Tarumae.

<table>
<thead>
<tr>
<th>Attribution</th>
<th>Trail</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Date City</td>
<td>Management</td>
</tr>
<tr>
<td>Starting point</td>
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<td></td>
</tr>
<tr>
<td>Passing point</td>
<td>Connected geosites</td>
<td>B01, B02</td>
</tr>
</tbody>
</table>

### Konbudake Mountain Trail

Konbudake rises 1,045m above sea level, on the boundary between Toyoura and Niseko Town. In the Ainu language, it is known as “tokonpo-nupuri” (little hump mountain). From the summit, you can see across to Mt. Usu, Lake Toya, and Mt. Yotei.

<table>
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</tr>
<tr>
<td>Passing point</td>
<td>Connected geosites</td>
<td>B01, B02</td>
</tr>
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</table>

### Orofure Mountain Trail

Orofure Mountain rises up 1,230m above sea level, on the boundary between Sobetsu Town and Noboribetsu City. From the summit you can enjoy scenery including Lake Toya, Mt. Yotei, Lake Kuttara, and the Pacific Ocean. In the coldest seasons you can see frost covered trees, and you can have fun snowshoeing or cross-country skiing.

<table>
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<tr>
<td>Passing point</td>
<td>Connected geosites</td>
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</table>
**The Wind's Memory Course**

A cycling road, 5.4km in length, that uses the railroad of the former Iburi line that connected Date Monbetsu and Kutchan. It goes from Date's Chuodori Line, Yamasita-cho, to Kaminagawa. This is a route that runs through open fields, and from where you can enjoy the view of Mt. Usu and Mt. Showa-Shinzan, which are visible on the north side, far into the distance. Related to the geosite “Iburi Line Railway Bridge Remains.”

<table>
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<tr>
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<td></td>
</tr>
<tr>
<td>Connected geosites</td>
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</tbody>
</table>

**Heisei Village Route**

A cycling road, 7km in length, that goes from Kitayuzawaonsencho to Honnmachi Koen, using the railroad of the former JNR Iburi line that connected Date Monbetsu Station and Kutchan. A route where you can enjoy the dynamic scenery along the Osaru River at close range. Related to the geosite “Iburi Line Railway Bridge Remains.”

<table>
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<tr>
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<td>Passing point</td>
<td></td>
</tr>
<tr>
<td>Connected geosites</td>
<td>G03</td>
</tr>
</tbody>
</table>
Museum Information Center

Museum

Museum mu01  Kitakogane Shell Mound Information Center

Shell mounds and graves from the Jomon period, as well as earthenware and tools excavated and a photo gallery are on exhibit here. In addition you can take part in tool making, fire making, pottery, bead making and several other experiences.

Keyword
Usage
Address  Date city, Kitakogane-cho 75
Tel.  0142-24-2122
Hours of operation  9:00～17:00
Holidays  December 1 - March 31

Museum mu02  Date City Fire & Disaster Prevention Center

The centre was created after the 2000 eruption to provide information regarding the volcanic activity and mitigation policy of Mt. Usu as well as raising the awareness on mitigation for local residents and tourists. The facility provides an educational opportunity for children and local residents to learn about volcanoes and mitigation. The centre is designed to be used as the Head Quarter Office when necessary, such as an intensification in volcanic activities.

Keyword  Volcano and Disaster education, Disaster response head office
Usage  Education, Information collection
Address  Date city, Matsugae-cho 13-1
Tel.  0142-33-9119
Hours of operation  9:00～17:00
Holidays  Every Monday
### Date City Historical Museum

The family of Date at Watari, who created the settlement in Date City after the Meiji Restoration's Boshin War, actively participated in the development and security of Hokkaido as part of the policy of the Meiji government, in order to save the plight of the feudal lords. At Date Pioneer Memorial Hall a variety of materials concerning the settlement of the city are exhibited which were donated by the Date family to the city.

<table>
<thead>
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<th><strong>Keyword</strong></th>
<th>Usage</th>
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<td></td>
<td>Date City, Umemoto-cho 61-2</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>Tel. 0142-23-2061</td>
</tr>
<tr>
<td><strong>Hours of operation</strong></td>
<td>9:00〜17:00</td>
</tr>
<tr>
<td><strong>Holidays</strong></td>
<td>December 1 - February 28</td>
</tr>
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</table>

### Usu Zenkoji Treasure Museum

The Usu Zenkoji treasure house is within Usu Zenkoji Temple, and holds on display over 200 valuable items, such as statues of the Shaka-Nyorai Buddha and Enku which have been designated as Hokkaido cultural assets, as well as a part of the Buddhist scriptures donated by the Tokugawa Shogunate. It tells the complete history of Usu Zenkoki Temple.

<table>
<thead>
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</thead>
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<td></td>
<td>Date City, Usumachi 124</td>
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<tr>
<td><strong>Address</strong></td>
<td>Tel. 0142-38-2007</td>
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<td><strong>Hours of operation</strong></td>
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</tr>
<tr>
<td><strong>Holidays</strong></td>
<td>Reservation Required</td>
</tr>
</tbody>
</table>

### Sobetsu Information Center “i”

Sobetsu Information Center i is a place where people can learn about volcanoes. As well as this, the majestic Usu-san and Showa-Shinsan can be seen up close from the building, and this combined with a beautiful landscape of fields have made it a popular place where people can relax together. In addition, as a disaster prevention chamber for cases of emergency such as imminent volcanic activity, it has been designed with a command adjustment feature.

<table>
<thead>
<tr>
<th><strong>Keyword</strong></th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Station, Volcano and Disaster education, Disaster prevention office</td>
<td>Education, Information collection</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>Tel. 0142-66-4200</td>
</tr>
<tr>
<td><strong>Hours of operation</strong></td>
<td>9:00-17:30 (April 1 - November 15), 9:00-17:00 (November 16 - March 31)</td>
</tr>
<tr>
<td><strong>Holidays</strong></td>
<td>Tuesdays except the national holiday (November 16 - March 31), December 31 - January 5</td>
</tr>
</tbody>
</table>
Museum mu06  Sobetsu Local History Museum

Introduces a variety of exhibits concerning the local history and culture which were built by our ancestors through their lives in harsh nature. It also exhibits Sumo champion Kitanoumi, he was born in this town. Moreover, the history of Lake Toya, Usu, and Mt. Showa-Shinzan can be learned. The parking lot of the now obsolete Sobetsu Station on the former JNR Iburi Line, and the station sign for Kubonai Station are also on display.

Keyword  Volcano and Disaster education, Archives
Usage  Education, Information collection
Address  Sobetsu town, Takinomachi 294-2
Tel.  0142-66-2201
Hours of operation  9:00～17:00
Holidays  Mondays between November and April

Museum mu07  Mimatsu Masao Memorial Museum

During the difficult times of the Second World War, Masao Mimatsu, local postmaster, monitored the eruption of the Usu volcano. Mimatsu helped Hokkaido University's Professor Omori with observations during the 1910 eruption, and through detailed observations of volcanic activity during the 1943-45 eruption, sketching the growth of lava dome and then summarizing it in a table, left a large amount of excellent records. This observation table is known as the “Mimatsu Diagram” and received the praise of the world's volcanologists when presented at the 1948 International Association of Volcanology Conference. The Mimatsu Masao Memorial Hall was established at the foot of Mt. Showa-Shinzan with the goal of not only saving the achievements of Mimatsu who saw Mt. Usu erupt three times in his life for posterity, but also to preserve the fundamental materials of Japanese Volcanology.

Keyword  Showa-Shinzan, Volcano and Disaster education, Masao Mimatsu, Mimatsu Diagram
Usage  Science, Education, Information collection
Address  Sobetsu town, Showa-Shinzan 184-12
Tel.  0142-75-2365
Hours of operation  8:00-17:00 (April to October), 9:00-16:00 (November to March)
Holidays  No scheduled holiday November to March
**Museum mu08  Irie / Takasago Shell Mound Museum**

Approximately 200 exhibits of relics excavated mainly from Irie/Takasago. Many exhibits including accessory made of tooth of wild pig living in Honshu, fishing tool made of deer and ceramics. Can be visited together with the Irie Shell Mound Park, which is just a five minute walk away.

**Keyword**  
Usage

**Address** 〒049-5605 Toyako town, Takasago 44
**Tel.** 0142-76-5802

**Hours of operation** 9:00〜17:00

**Holidays** Every Monday and the day after national holidays from December to March

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**Museum mu09  Toyako Visitor Center / Volcano Science Museum**

The Toyako Visitor Center provides and displays the information required for visitors to enjoy the nature of Toyako at the Shikotsu-Toya National Park. The center also features informative exhibits on the nature surrounding Lake Toya, the eruption history of Mt. Usu, and the plants and animals that live in the surrounding area. A high-density video can also be seen which introduces the nature of the four seasons of Lake Toya. In addition, guidance is given such as on information about nature watching around Lake Toya. The Volcano Science Museum allows visitors to learn by feeling the vibration of the powerful three-surface multi-vision of the eruption of Mt. Usu, and through the videos, panels, and real models. It introduces the visitor to the history of the eruptions of Mt. Usu, through to the indications and scale of the 2000 eruption, the damage it caused, and the reconstruction work in response to it.

**Keyword** Environmental and Nature education, Volcano education, Lake Toya, Mt. Usu

**Usage** Nature, Education, Information collection

**Address** Toyako town, Toyako Onsen 142-5
**Tel.** 0142-75-2555

**Hours of operation** 9:00〜17:00

**Holidays** December 31 - January 1
The Forestry Museum is adjacent to Nakajima Pier and has displays on the forest and wildlife surrounding Lake Toya.

**Keyword** Nakajima, Environmental and Nature education  
**Usage** Nature, Education, Information collection  
**Address** Nakajima Island  
**Tel.** 0142-75-4400  
**Hours of operation** 9:00〜16:00  
**Holidays** Beginning of November to Mid April

An experience learning facility by the Ministry of the Environment. Offers a variety of experience programs as well as guidance on the region's nature for both locals and visitors to Lake Toya. Help is also provided through “Environment Learning” which aims to give knowledge of local nature and the regional environment.

**Keyword** Environmental and Nature education  
**Usage** Education, Information collection  
**Address** 〒049-5813 Toyako town, Takarada 2-2  
**Tel.** 0142-82-5999  
**Hours of operation** 9:00〜17:00  
**Holidays** Monday (The following day if Monday is a national holiday) and December 31 to January 5.

The renovated building was formerly the old Toya city hall building and is located in front of Toyako. Exhibits include the works of sculpture Sunazawa Bikky which are Hokkaido symbols, works from the “Toya International Sculpture Biennale” small sculpture competition, a limited book collection of first editions from recent and contemporary Japanese literature, as well as photos by Banri Namikawa who served as chief photographer for the UNESCO World Heritage Site. Toyako Gurutto Sculpture Park, is an “Outdoor sculpture park in which people and nature can come together”. As such, 58 sculptures and objects have been placed on the lake so as to surround Lake Toya. Visitors can enjoy the combination of the landscape of the Toya caldera and art.

**Keyword** Art, Lake Toya  
**Usage** Art, Education, Information collection  
**Address** Toyako town, Toya-cho 96  
**Tel.** 0142-87-2525  
**Hours of operation** 9:00-17:00 (April to September), 9:00-16:00 (October to November)  
**Holidays** Monday (The following day if Monday is a national holiday) and December to March
### Museum mu13  Mizuumi Town Library

The Mizuumi Town Library, alongside its role as the community library for Toyako Town, it also holds a number of maps, brochures, and publications related to volcanoes which have been produced in collaboration with volcanic researchers. They have made use of the library's location in a tourist destination in the vicinity of the volcano crater to conduct their research. The library is open to tourists.

**Keyword**  
Usage

**Address**  Toyako town, Toyako Onsen 142-154  
**Tel.** 0142-75-4702

**Hours of operation**  9:30～17:00

**Holidays**  Thursdays, national holidays, December 29 - January 5, the end of each month

### Museum mu14  Toya Caldera and Usu Volcano Geopark Volcano Village Information Center / Mountaintop Disaster Prevention Theater

The Volcano Village Information Center is located at the ropeway station at the foot of Mt. Usu. The geopark exhibition facilities there introduce the great activities of local residents and researchers into the site’s recognition as a world geopark, as well as the eruption history of Mt. Usu. The Mountaintop Disaster Prevention Theater at the summit station shows a video related to Usu Volcano disaster prevention.

**Keyword**  
Usage

**Address**  Sobetsu town, Showa-Shinzan 184-5  
**Tel.** 0142-75-2401

**Hours of operation**  During ropeway operation hours

**Holidays**  No holidays

### Museum mu15  Nature Park Foundation Mt. Showa-Shinzan Park Service Center

A Ministry of the Environment facility which exhibits dioramas, etc. of Mt. Usu and Mt. Showa-Shinzan. As well as an abundance of video exhibits which explain the natural surroundings, the facility also provides tourist information around Lake Toya.

**Keyword**  
Usage

**Address**  Sobetsu town, Showashinzan  
**Tel.** 0142-75-2241

**Hours of operation**  8:30-17:00 (April to November), 9:00-16:00 (December to March)

**Holidays**  December 29 to January 3
**Museum mu16**  **Usu Arutori Coast Nature House**

A private exhibition facility located at the lower slope of hummocky hill in Cape Arutori. Situated in a place which overlooks the southern foot of Mt. Usu and Usu Bay, this facility offers dioramas of Usu, specimens left by the 1640 tsunami deposit which caused the sector collapse of the Komagatake, and exhibits on the surrounding environment. In particular, there are many samples of shellfish.

<table>
<thead>
<tr>
<th><strong>Keyword</strong></th>
<th>Usage</th>
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<tr>
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<tr>
<td><strong>Holidays</strong></td>
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</table>
### Information Center

#### Information in 01: Road Station “Toyako”

Michi no Eki located in Toyako Town. From the observatory which is adjacent to the south side of the facility and which faces the national highway No. 230 magnificent scenery from Lake Toya can be experienced. The same can be said for the north side of the facility, which overlooks the countryside dominated by Mt. Yotei. The facility itself displays and sells locally processed goods and fresh produce caught in the area, and also has a small dining corner which offers a varied menu of food made from locally produced vegetables.

- **Keyword**: Road Station
- **Usage**: Information collection
- **Address**: Toyako town, Kagawa 9-4
- **Tel.**: 0142-87-2200
- **Hours of operation**: 9:00-18:00 (April to October), 9:00-17:00 (November to March)
- **Holidays**: Tuesdays, and year end / New Year’s

#### Information in 02: Toya Lake Station

At this facility which serves as a place for tourist information. It also sells Toya specialty vegetables, as well as Sanuki Udon which is sent directly from the sister city, Mitoyo, Kagawa Prefecture, western Japan. As an inlet of Lake Toya, it offers amazing scenery which changes with the seasons.

- **Keyword**: Lake Toya
- **Usage**: Information collection
- **Address**: Toyako town, Toya 1-100
- **Tel.**: 0142-86-3108
- **Hours of operation**: 9:00-18:00 (April to September), 9:00-17:00 (October to March)
- **Holidays**: No holidays (April to October), Monday (The following day if Monday is a national holiday) (November to March) and year end / New Year’s

#### Information in 03: Road Station “Aputa”

Facing national highway 37, it is conveniently located below Abuta Fishing Port, and enjoys views of Volcano Bay. The retro building has an image of a Banya in harmony with the sea. Behind it is the Park Golf Course, and the facilities look impressive under the sunset. The facility displays and sells processed and locally produced agricultural products, and also sells a natural, healthy, homemade ice cream which is make from fresh squeezed milk.

- **Keyword**: Road Station
- **Usage**: Information collection
- **Address**: Toyako town, Irie 84-2
- **Tel.**: 0142-76-5501
- **Hours of operation**: 9:00-18:00 (April to October), 9:00-17:00 (November to March)
- **Holidays**: Year end / New Year’s
### Information in04  Road Station “Toyoura”

The facility sells locally produced produce and processed goods. 10 kinds of ice cream (gelato) are made on the premises using locally produced cow milk and strawberries. The strawberry gelato in particular is popular. During strawberry season, the area is filled with stalls selling the fruit.

**Keyword**  Road Station  
**Usage**  Information collection  
**Address**  Toyoura town, Asahi 65-8  
**Tel.**  0142-83-1010  
**Hours of operation**  9:00-18:00 (May to October), 9:30-17:00 (November to April)  
**Holidays**  Wednesdays (November to March), December 31 to January 3

### Information in05  Road Station “Date Rekishi no Mori”

The main facility, Reimeikan, is located within the “Date Rekishi no Mori” general park which also features a tourist souvenir hall and Ai Kobo and swordsmith workshops. At the Ai Kobo Workshop visitors can experience Ai Kobo using materials produced in Date, the only place which produces such material in Hokkaido. At the swordsmith workshop visitors can view traditional Japanese sword techniques. Furthermore, next to Reimeikan there is the Naoki Prize winning writer Tomiko Miyao’s literature memorial which allows visitors to come into contact with culture.

**Keyword**  Road Station  
**Usage**  Information collection  
**Address**  Date city, Umemotocho 57-1  
**Tel.**  0142-25-5567  
**Hours of operation**  9:00-18:00  
**Holidays**  December 31 - January 5

### Information in06  Road Station “Forest 276 Otaki”

This is the world's largest log house, 200m in length, and is a place where the smells of wood and marble are in harmony. Located in the center of Shikotsu-Toya National Park, as a relay point for national highway 276 providing local informations.

**Keyword**  Road Station  
**Usage**  Information collection  
**Address**  Date city, Otaki-ku Sangaidaki 637-5  
**Tel.**  0142-68-6041  
**Hours of operation**  9:00-18:00  
**Holidays**  No holidays